most common isolates were yeast like fungi- 14 strains (99%). The dominant strains from Candida genus were *C. glabrata* 4 (28.5%), *C. krusei* 4 (28.5%), *C. albicans* 2 (14.3%), *C. tropicalis* 1 (7.2%), *C. parapsilosis* 1 (7.2%). Other fungal strains: *Cryptococcus neoformans* isolated in 2 cases (14.3%) and *Aspergillus fumigatus*. 1 strain- 6.7% out of the total number of cultures. The susceptibility of isolates for Amphotericine B and Voriconazole was 100%. In 13 strains which were tested for Itraconazole, 6 (46%) were resistant, the 16.7% of analyzed spesies were Flukonazole resistant. 100% of *C. glabrata* isolates were susceptible for Caspofungin and Posaconazole.
Conclusions: The performed analyses indicated that yeast like fungi had the highest contribution in fungemias (99%). The main etiological factors of fungemia in immunodeficient patients were non-albicans species 66.7% 3. The dominant species from Candida genus with increased resistance for antifungal agents were *C. glabrata* 33.3% and C.krusei 33.3%. The most efficient antifungal agents were in vitro Amphotericin B and Voriconazole.

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A Case of Pulmonary Angioinvasive Zygomycosis in a Patient with Acute Promyelocytic Leukemia successfully treated with Surgical Resection and Posaconazole

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31-year-old African American male patient previously healthy and a retired professional football player presented to his primary care physician on early August of 2007 complaining of cough, and initially treated for a suspected upper respiratory infection with cefpodoxime and doxycycline without any improvement. On August 20, 2007, he developed hemoptysis and was found to have anemia (8.2 g/dL), thrombocytopenia (23,000/mm^3) and leukocytosis (14.500/mm^3) with 50% blasts. A bone marrow biopsy on August 21, 2007 was consistent with Acute Promyelocytic Leukemia (APL) and started induction chemotherapy on August 24, 2007 with ATRA, Idarubicin, and Dexamethasone until August 30, 2007 when Idarubicin and Dexamethasone were discontinued and was kept on ATRA. He became neutropenic on August 27, 2007 and on September 9, 2007 developed fever associated with a right middle lobe consolidation and a right pleural effusion and thoracentesis cultures were negative. He remained neutropenic until September 17, 2007 and during this time received broad spectrum antibiotics and antifungals including Caspofungin from August 24, 2007 to September 6, 2007, Voriconazole from September 6, to September 10, 2007 and Ambisome from September 10, 2007 until October 9, 2007. On September 21, 2007 and due to the progression of the infiltrate, he had a bronchoscopy and a transbronchial biopsy was consistent with Angioinvasive Zygomycosis and was kept on intravenous Ambisome and Posaconazole was added. On October 1, 2007, he underwent a right exploratory thoracotomy with decortication of the right lower lobe and partial parietal pleurectomy and right middle lobectomy and the pathologic report showed Angioinvasive Zygomycosis, however, the fungal cultures were negative. He remained on intravenous Ambisome and Posaconazole and fourteen days later was dismissed home on Posaconazole with the intention to continue this agent while on therapy for the APL and to extend the treatment for one additional year post-remission. PCRs for APL in peripheral blood have been negative since October 15, 2007.
Conclusion: He is currently on therapy for the APL with ATRA, Methotrexate, and 6-Mercaptopurine and the plan is to extend this regimen for two years. He was re-evaluated on February 5, 2008 and was asymptomatic and follow-up chest x-rays have continued to show signs of resolution and is now only consistent with post-operative changes. He has continued to tolerate Posaconazole well.

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Invasive Zygomycoses in a Tertiary Hhaematooncological Centre in the Czech Republic

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Background: Infections by Zygomycetes (class Zygomycetes, most infections by fungi of the Mucorales order) are rare emerging mould infections found almost exclusively among immunocompromised patients (malignant diseases, after haematopietic stem cell transplantation (HSCT) or solid organ transplantation, neutropenia, iron overload, diabetes mellitus, drug addiction ...). In the last decades the number of referred cases in English written literature increased. The outcome of treatment is slowly improving due to aggressive surgical treatment together with modern antimycotic treatment. In spite of that the mortality of pulmonary form remains over 80%.
Materials: We summarized the invasive infections by Zygomycetes in a 33 bed (21 standard beds, 8 intensive care beds, 4 transplant beds) tertiary hematooncological centre in Prague, Czech Republic.
Methods: A prospective monitoring of mould infections in the time period 1/2003-12/2007 was used and we choose only the proven cases (according to EORTC-MSG criteria).
Results: There were two clusters of infections by Zygomycetes in 60 months – 4 proven cases in 1-4/2003, all caused by *Rhizomucor pusillus*, which had been identified in hospital environment before the clinical cases appeared. 2 proven cases 12/2005-1/2006 were identified by histology without further specification by culture. Four of 6 patients were after HSCT and 2 after therapy for acute leukemias. Five of 6 patients developed pulmonary form, one of HSCT patients developed disseminated form. 4 patients died from the progression of mycosis, one died from the relapsing malignancy, one patient lives without any sign of fungal infection.
Conclusions: The aforementioned cases support the evidence of poor outcome of zygomycoses in haematooncology patients. The predominance of pulmonary form and high mortality in this patient group is in concordance with literature. The clustering of cases to two time periods and identification of Zygomycetes in hospital environment prior to the first period support the idea of higher vigilance and/or preventive measures (change in antimycotic policy or temporary closure of the unit) when these extremely dangerous fungi are found in the environment of immunocompromised patient.

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Immunocompromised Patients with Possible Sphenoid Sinus Aspergilloma the Role of Detection of *Aspergillus* Antigen Galactomannan

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Background: The invasive infections from *Aspergillus* are a major cause of morbidity and mortality in immunocompromised patients. The diagnosis is based on the histological tests and the growth of the fungus in a tissue culture, after a dangerous and therefore avoided in neutropenic patient's biopsy. The combination of the detection of *Aspergillus* antigen Galactomannan (GM) in serum and X-ray findings is considered to be an indication equivalent to a positive biopsy sample.